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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,190	08/27/2003	Jan Civlin	SUNMP317/P9293	6454

32291 7590 01/16/2007

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EXAMINER	
INGBERG, TODD D	
ART UNIT	**PAPER NUMBER**
2193	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/650,190	CIVLIN, JAN	
	Examiner	Art Unit	
	Todd Ingberg	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *1/31/05* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1 – 22 have been examined.

Drawings

1. The new drawings filed January 31, 2005 have been accepted.

Specification

2. Examiner requests Applicant complete the Cross Reference section on page 1 of the Specification.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 14 – 22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful, concrete and tangible result. No physical transformation is recited and additionally, the final result of the claim is optimization which is not a tangible result because the result is not stored/updated or displayed on a computer readable medium. The following link on the World Wide Web is for the United States Patent And Trademark Office (USPTO) policy on 35 U.S.C. §101.

<http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf>

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN Dwyer # 5,727,167 (D) in view of USPN Benitez et al # 6,189,141 B1 (B).

Claim 1
Dwyer teaches a method for execution control acquisition of a program, comprising: executing a program; determining when a hardware performance counter reaches a threshold during the executing of the program (D, Abstract and Figure 3); Benitez teaches when the threshold is reached, switching execution control to a dynamic optimizer (B, Abstract) ; and executing an optimized version of the program (B, Abstract).
Dwyer teaches Threshold support in performance monitoring at a low level and Benitez teaches the interaction of a threshold for performance monitoring and the interaction of that threshold on activating and deactivating optimization. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Dwyer and Benitez because performance based optimization improves flow control (B, col 2, lines 29 – 32).

Claim 2
The method of claim 1, wherein the executing of the program includes executing original binary code for the program (B, Figure 4, #201).

Claim 3
The method of claim 1, wherein the executing of the optimized version of the program includes executing an optimized binary code file for the program (B, Figure 4, #222, 224, modified Program Lookup Table in normal terms of the art – modifying the order of the program).

Claim 4
The method of claim 1, wherein the hardware performance counter is selected from the group consisting of an instruction counter and a cycle counter. (D as per claim 1).

Claim 5
The method of claim 1, wherein the hardware performance counter is a cycles per instruction counter. (D as per claim 1).

Claim 6
The method of claim 1, wherein the hardware performance counter is integrated into a central processing unit. (D as per claim 1).

Claim 7
A method for executing an optimized version of a program, comprising:
executing an optimized version of a program; receiving an interrupt during execution of the optimized version of the program and returning execution control to an operating system; executing an original version of the program; monitoring a hardware performance counter during the executing of the original version of the program; when the hardware performance counter reaches a threshold during the executing of the original version of the program, switching execution control to a dynamic optimizer; and continuing the executing of the optimized version of the program as directed by the dynamic optimizer. As per claim 1.

Claim 8
The method of claim 7, wherein the executing of the optimized version of the program includes executing an optimized binary code file for the program. As per the rejection for claim 3.

Claim 9
The method of claim 7, wherein the executing of the original version of the program includes executing original binary code for the program. As per the rejection for claim 2.

Claim 10
The method of claim 7, wherein the hardware performance counter is selected from the group consisting of an instruction counter and a cycle counter. As per the rejection for claim 4.

Claim 11
The method of claim 7, wherein the hardware performance counter is a cycles per instruction counter. As per the rejection for claim 5.

Claim 12
The method of claim 7, wherein the threshold is set to a value that is indicative of unacceptable performance. Claim 1 teaches the threshold when to turn ON optimization – reaching the threshold is deemed unacceptable performance.

Claim 13
The method of claim 7, wherein the hardware performance counter is integrated into a central processing unit. As per the rejection for claim 6.

Claim 14
Computer readable media containing program instructions for execution control acquisition of a program, the computer readable media comprising:

program instructions for executing a program; program instructions for determining when a hardware performance counter reaches a threshold during the executing of the program; program instructions for switching execution control to a dynamic optimizer when the threshold is reached; and program instructions for executing an optimized version of the program.
As per claim 1.

Claim 15
The computer readable media of claim 14, wherein the executing of the program includes executing original binary code for the program. As per the rejection for claim 2.

Claim 16
The computer readable media of claim 14, wherein the executing of the optimized version of the program includes executing an optimized binary code file for the program. As per the rejection for claim 3.

Claim 17
The computer readable media of claim 14, wherein the hardware performance counter is selected from the group consisting of an instruction counter, a cycle counter, and a cycles per instruction counter. As per the rejection for claim 5.

Claim 18
Computer readable media containing program instructions for executing an optimized version of a program, the computer readable media comprising:
program instructions for executing an optimized version of a program; program instructions for receiving an interrupt during execution of the optimized version of the program and returning execution control to an operating system; program instructions for executing an original version of the program; program instructions for monitoring a hardware performance counter during the executing of the original version of the program; program instructions for switching execution control to a dynamic optimizer when the hardware performance counter reaches a threshold during the executing of the original version of the program; and program instructions for continuing the executing of the optimized version of the program as directed by the dynamic optimizer. As per claim 1.

Claim 19
The computer readable media of claim 18, wherein the executing of the optimized version of the program includes executing an optimized binary code file for the program. As per the rejection for claim 3.

Claim 20
The computer readable media of claim 18, wherein the executing of the original version of the program includes executing original binary code for the program. As per the rejection for claim 2.

Claim 21
The computer readable media of claim 18, wherein the hardware performance counter is selected from the group consisting of an instruction counter, a cycle counter, and a cycles per instruction counter. As per the rejection for claim 4.

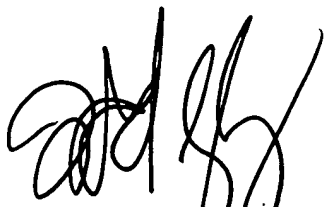
Claim 22
The computer readable media of claim 18, wherein the threshold is set to a value that is indicative of unacceptable performance. (See rejection for claim 1 for citing and claim 12 for explanation).

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Todd Ingberg whose telephone number is (571) 272-3723. The examiner can normally be reached on during the work week..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Todd Ingberg
Primary Examiner
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TI